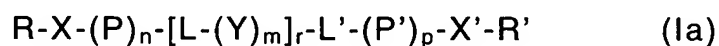


**WHAT IS CLAIMED IS:**

1. A composition comprising, in a cosmetically acceptable medium,  
at least one fluorescent dye that is soluble in said medium; and  
at least one associative polymer chosen from associative polyurethane derivatives, associative cellulose derivatives, associative polyvinyl lactam derivatives and associative unsaturated polyacid derivatives;  
  
provided that the composition does not comprise, as a fluorescent agent, 2-[2-(4-dialkylamino)phenylethenyl]-1-alkylpyridinium wherein the alkyl radical of the pyridinium nucleus is a methyl or ethyl radical, the alkyl radical of the benzene nucleus is a methyl radical, and the counterion is a halide.
2. The composition according to Claim 1, wherein the at least one associative polymer is chosen from those of cationic, nonionic, anionic and amphoteric nature.
3. The composition according to Claim 1, wherein the associative polyurethane derivatives are anionic and comprise at least one unit derived from a monomer of the  $\alpha,\beta$ -monoethylenically unsaturated carboxylic acid type.
4. The composition according to Claim 1, wherein the associative polyurethane derivatives are cationic and correspond to the formula (Ia):



wherein:

R and R', which may be identical or different, are each chosen from hydrophobic groups and a hydrogen atom;

X and X', which may be identical or different, are each chosen from groups comprising at least one amine functional group optionally bearing at least one hydrophobic group, and groups L";

L, L' and L", which may be identical or different, are each chosen from groups derived from a diisocyanate;

P and P', which may be identical or different, are each chosen from groups comprising at least one amine functional group optionally bearing at least one hydrophobic group;

Y is chosen from hydrophilic groups;

r is an integer ranging from 1 to 100;

n, m and p, which may be identical or different, each range from 0 to 1000;

provided that the molecule comprises at least one amine functional group chosen from protonated and quaternized amine functional groups and at least one hydrophobic group.

5. The composition according to Claim 4, wherein r is an integer ranging from 1 to 50.

6. The composition according to Claim 5, wherein r is an integer ranging from 1 to 25.

7. The composition according to Claim 1, wherein the associative polyurethane derivatives are chosen from nonionic polyether polyurethanes.

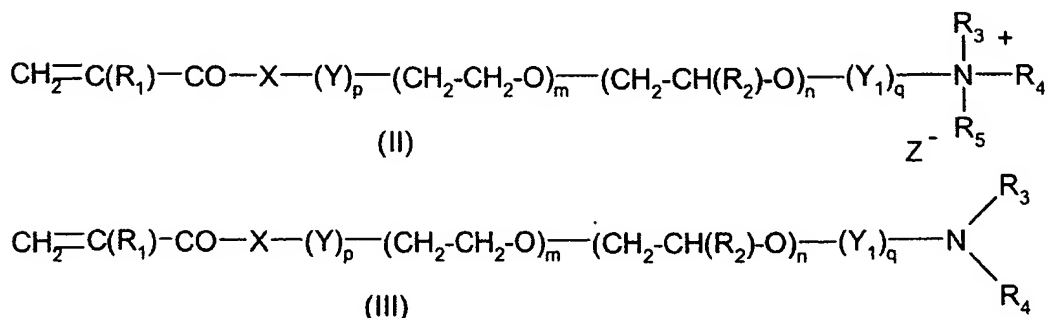
8. The composition according to Claim 1, wherein the associative cellulose derivatives are cationic and are chosen from celluloses and hydroxyethylcelluloses quaternized with at least one hydrophobic group.

9. The composition according to Claim 1, wherein the associative cellulose derivatives are nonionic and are chosen from hydroxyethylcelluloses modified with at least one hydrophobic group.

10. The composition according to Claim 1, wherein the associative polyvinylactam derivatives are cationic and comprise:

a) at least one monomer chosen from monomers of vinylactam and alkylvinylactam;

b) at least one monomer chosen from monomers of formulae (II) and (III):



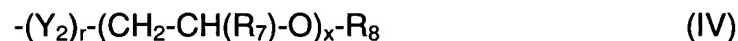
wherein:

X is chosen from an oxygen atom and NR<sub>6</sub> radicals,

R<sub>1</sub> and R<sub>6</sub>, which may be identical or different, are each chosen from a hydrogen atom and linear and branched C<sub>1</sub>-C<sub>5</sub> alkyl radicals,

R<sub>2</sub> is chosen from linear and branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals,

R<sub>3</sub>, R<sub>4</sub> and R<sub>5</sub>, which may be identical or different, are each chosen from a hydrogen atom, linear and branched C<sub>1</sub>-C<sub>30</sub> alkyl radicals, and radicals of formula (IV):



Y, Y<sub>1</sub> and Y<sub>2</sub>, which may be identical or different, are each chosen from linear and branched C<sub>2</sub>-C<sub>16</sub> alkylene radicals,

R<sub>7</sub> is chosen from a hydrogen atom, linear and branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals, and linear and branched C<sub>1</sub>-C<sub>4</sub> hydroxyalkyl radicals,

R<sub>8</sub> is chosen from a hydrogen atom and linear and branched C<sub>1</sub>-C<sub>30</sub> alkyl radicals,

p, q and r, which may be identical or different, are each 0 or 1,

m and n, which may be identical or different, are each an integer ranging from 0 to 100,

x is an integer ranging from 1 to 100,

Z<sup>-</sup> is an anion chosen from organic and mineral acid anions,

with the proviso that:

- at least one of the substituents chosen from  $R_3$ ,  $R_4$ ,  $R_5$  and  $R_8$  is chosen from linear and branched  $C_9$ - $C_{30}$  alkyl radicals,
- if m or n is other than zero, then q is equal to 1, and
- if m or n is equal to zero, then p or q is equal to 0.

11. The composition according to Claim 1, wherein the associative polyvinyl lactam derivatives are nonionic and are chosen from copolymers of vinylpyrrolidone and of at least one fatty-chain hydrophobic monomer.

12. The composition according to Claim 1, wherein the associative unsaturated polyacid derivatives are chosen from anionic polymers comprising at least one hydrophilic unit of olefinic unsaturated carboxylic acid type and at least one hydrophobic unit of unsaturated carboxylic acid ( $C_{10}$ - $C_{30}$ ) alkyl ester type.

13. The composition according to Claim 1, wherein the associative unsaturated polyacid derivatives are chosen from anionic polymers comprising among its monomers at least one  $\alpha,\beta$ -monoethylenically unsaturated carboxylic acid and at least one ester of an  $\alpha,\beta$ -monoethylenically unsaturated carboxylic acid and of an oxyalkylenated fatty alcohol.

14. The composition according to Claim 12, wherein the carboxylic acid is chosen from acrylic acids and methacrylic acids.

15. The composition according to Claim 13, wherein the carboxylic acid is chosen from acrylic acids and methacrylic acids.

16. The composition according to Claim 1, wherein the at least one associative polymer is present in an amount ranging from 0.01% to 10% by weight, relative to the total weight of the composition.

17. The composition according to Claim 16, wherein the at least one associative

polymer is present in an amount ranging from 0.1% to 5% by weight, relative to the total weight of the composition.

18. The composition according to Claim 1, wherein the optionally neutralized fluorescent dye is soluble in the cosmetic medium to at least 0.001 g/l at a temperature ranging from 15°C to 25°C.

19. The composition according to Claim 18, wherein the optionally neutralized fluorescent dye is soluble in the cosmetic medium to at least 0.5 g/l at a temperature ranging from 15°C to 25°C.

20. The composition according to Claim 19, wherein the optionally neutralized fluorescent dye is soluble in the cosmetic medium to at least 1 g/l at a temperature ranging from 15°C to 25°C.

21. The composition according to Claim 20, wherein the optionally neutralized fluorescent dye is soluble in the cosmetic medium to at least 5 g/l at a temperature ranging from 15°C to 25°C.

22. The composition according to Claim 1, wherein the at least one fluorescent dye chosen from dyes in the orange range.

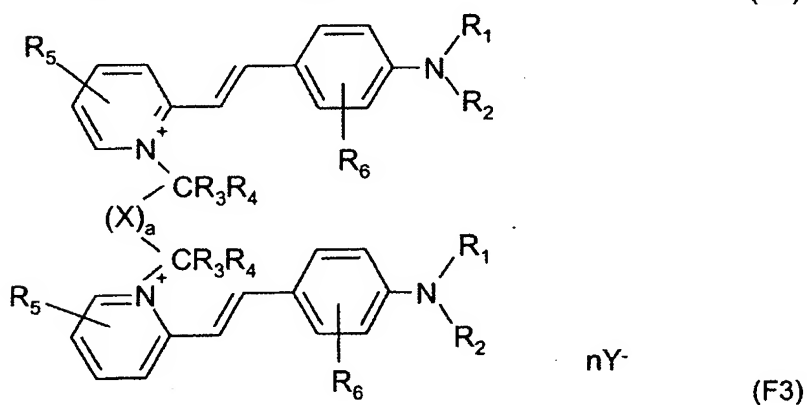
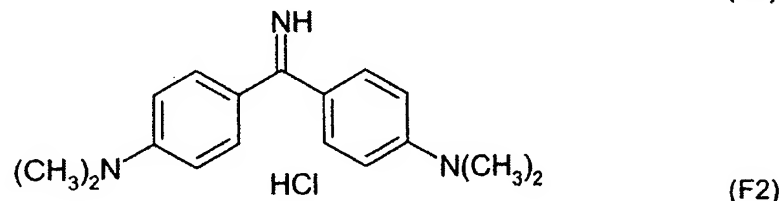
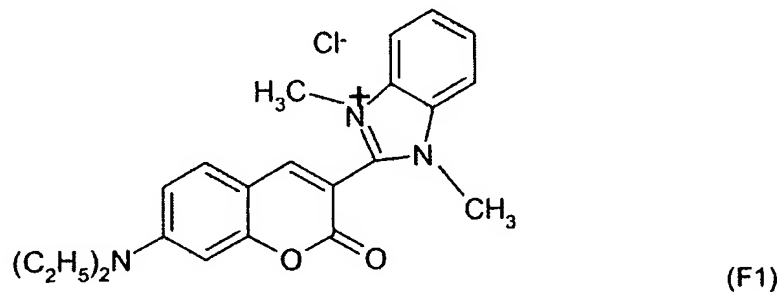
23. The composition according to Claim 1, wherein the at least one fluorescent dye provides a reflectance maximum that is in the wavelength range from 500 to 650 nanometers.

24. The composition according to Claim 23, wherein the at least one fluorescent dye provides a reflectance maximum that is in the wavelength range from 550 to 620 nanometers.

25. The composition according to Claim 1, wherein the at least one fluorescent dye is chosen from the fluorescent dyes belonging to the following families: naphthalimides;

cationic and non-cationic coumarins; xanthenodiquinolizines; azaxanthenes; naphtholactams; azlactones; oxazines; thiazines; dioxazines; polycationic fluorescent dyes of azo, azomethine and methine types.

26. The composition according to Claim 1, wherein the at least one fluorescent dye is chosen from dyes of the following formulae (F1), (F2), and (F3):



wherein:

$R_1$  and  $R_2$ , which may be identical or different, are each chosen from:

- a hydrogen atom;
- linear and branched alkyl radicals comprising from 1 to 10 carbon atoms, optionally interrupted and/or substituted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and/or

optionally substituted with at least one halogen atom;

- aryl and arylalkyl radicals, wherein the aryl group comprises 6 carbon atoms and the alkyl radical comprises from 1 to 4 carbon atoms; the aryl radical is optionally substituted with at least alkyl radical chosen from linear and branched alkyl radicals comprising from 1 to 4 carbon atoms optionally interrupted and/or substituted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and/or optionally substituted with at least one halogen atom;
- R<sub>1</sub> and R<sub>2</sub> may optionally be linked so as to form a heterocycle with the nitrogen atom and may comprise at least one other hetero atom, wherein the heterocycle is optionally substituted with at least one alkyl radical chosen from linear and branched alkyl radicals and optionally being interrupted and/or substituted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and/or optionally substituted with at least one halogen atom; and
- R<sub>1</sub> or R<sub>2</sub> may optionally be engaged in a heterocycle comprising the nitrogen atom and one of the carbon atoms of the phenyl group bearing the nitrogen atom;

R<sub>3</sub> and R<sub>4</sub>, which may be identical or different, are each chosen from a hydrogen atom and alkyl radicals comprising from 1 to 4 carbon atoms;

R<sub>5</sub>, which may be identical or different, are each chosen from a hydrogen atom, halogen atoms and linear and branched alkyl radicals comprising from 1 to 4 carbon atoms, optionally interrupted with at least one hetero atom;

R<sub>6</sub>, which may be identical or different, are each chosen from a hydrogen atom; halogen

atoms; linear and branched alkyl radicals comprising from 1 to 4 carbon atoms, optionally substituted and/or interrupted with at least one entity chosen from hetero atoms and groups bearing at least one hetero atom and/or optionally substituted with at least one halogen atom;

X is chosen from:

- linear and branched alkyl radicals comprising from 1 to 14 carbon atoms and alkenyl radicals comprising from 2 to 14 carbon atoms, optionally interrupted and/or substituted with at least one entity chosen from hetero atoms and groups bearing at least one hetero atom and/or optionally substituted with at least one halogen atom;
- 5- and 6-membered heterocyclic radicals optionally substituted with at least one alkyl radical chosen from linear and branched alkyl radicals comprising from 1 to 14 carbon atoms, optionally substituted with at least one hetero atom; optionally substituted with at least one aminoalkyl radical chosen from linear and branched aminoalkyl radicals comprising from 1 to 4 carbon atoms, optionally substituted with at least one hetero atom; and optionally substituted with at least one halogen atom;
- fused and non-fused, aromatic and diaromatic radicals, optionally separated with at least one alkyl radical chosen from alkyl radicals comprising from 1 to 4 carbon atoms, wherein at least one of the aryl radicals is optionally substituted with at least one halogen atom or with at least one alkyl radical chosen from alkyl radicals comprising from 1 to 10 carbon atoms optionally substituted and/or interrupted with at least one entity chosen from hetero atoms and groups bearing at least one hetero atom; and



- a dicarbonyl radical;
- provided that the group X possibly bears at least one cationic charge;

a is equal to 0 or 1;

Y<sup>-</sup>, which may be identical or different, are each an anion chosen from organic and mineral anions; and

n is an integer at least equal to 2 and at most equal to the number of cationic charges present in the fluorescent compound.

27. The composition according to Claim 26, wherein in the formula (F3) defining R<sub>1</sub> and R<sub>2</sub>, the linear and branched alkyl radicals are chosen from linear and branched alkyl radicals comprising from 1 to 4 carbon atoms.

28. The composition according to Claim 26, wherein in the formula (F3) defining R<sub>1</sub> and R<sub>2</sub>, the heterocycle is optionally substituted with at least one alkyl radical chosen from linear and branched alkyl radicals comprising from 1 to 4 carbon atoms.

29. The composition according to Claim 1, wherein the at least one fluorescent dye is present in an amount ranging from 0.01% to 20% by weight, relative to the total weight of the composition.

30. The composition according to Claim 29, wherein the at least one fluorescent dye is present in an amount ranging from 0.05% to 10% by weight, relative to the total weight of the composition.

31. The composition according to Claim 30, wherein the at least one fluorescent dye is present in an amount ranging from 0.1% to 5% by weight, relative to the total weight of the composition.

32. The composition according to Claim 1, further comprising at least one non-fluorescent additional direct dye chosen from direct dyes of nonionic, cationic and anionic

nature.

33. The composition according to Claim 32, wherein the at least one additional direct dye is chosen from nitrobenzene dyes, azo dyes, anthraquinone dyes, naphthoquinone dyes, benzoquinone dyes, phenothiazine dyes, indigoid dyes, xanthene dyes, phenanthridine dyes, phthalocyanin dyes and triarylmethane-based dyes.

34. The composition according to Claim 32, wherein the at least one additional direct dye is present in an amount ranging from 0.0005% to 12% by weight, relative to the total weight of the composition.

35. The composition according to Claim 1, wherein the composition is in the form of a lightening dyeing shampoo.

36. The composition according to Claim 1, further comprising at least one oxidation base chosen from para-phenylenediamines, bis(phenyl)alkylenediamines, para-aminophenols, ortho-aminophenols and heterocyclic bases, and the acid and base addition salts thereof.

37. The composition according to Claim 36, wherein the at least one oxidation base is present in an amount ranging from 0.0005% to 12% by weight, relative to the total weight of the composition.

38. The composition according to Claim 36, further comprising at least one coupler chosen from meta-phenylenediamines, meta-aminophenols, meta-diphenols and heterocyclic couplers, and the acid and base addition salts thereof.

39. The composition according to Claim 38, wherein the at least one coupler is present in an amount ranging from 0.0001% to 10% by weight, relative to the total weight of the composition.

40. A ready-to-use composition comprising, in a cosmetically acceptable medium,

at least one fluorescent dye that is soluble in said medium;

at least one associative polymer chosen from associative polyurethane derivatives, associative cellulose derivatives, associative polyvinyl lactam derivatives and associative unsaturated polyacid derivatives; and

at least one oxidizing agent;

provided that the composition does not comprise, as a fluorescent agent, 2-[2-(4-dialkylamino)phenylethenyl]-1-alkylpyridinium wherein the alkyl radical of the pyridinium nucleus is a methyl or ethyl radical, the alkyl radical of the benzene nucleus is a methyl radical, and the counterion is a halide.

41. The composition according to Claim 40, wherein the at least one oxidizing agent is chosen from hydrogen peroxide, urea peroxide, alkali metal bromates, persalts, and enzymes.

42. The composition according to Claim 41, wherein the persalts are chosen from perborates and persulphates.

43. The composition according to Claim 41, wherein the enzymes are chosen from peroxidases and two-electron and four-electron oxidoreductases.

44. A process for dyeing human keratin fibers with a lightening effect, comprising:

a) applying to said keratin fibers a composition for a time that is sufficient to develop desired coloration and lightening, wherein the composition comprises, in a cosmetically acceptable medium,

at least one fluorescent dye that is soluble in said medium; and

at least one associative polymer chosen from associative polyurethane derivatives, associative cellulose derivatives, associative polyvinyl lactam derivatives and associative unsaturated polyacid derivatives;

provided that the composition does not comprise, as a fluorescent agent, 2-[2-(4-dialkylamino)phenylethenyl]-1-alkylpyridinium wherein the alkyl radical of the pyridinium nucleus is a methyl or ethyl radical, the alkyl radical of the benzene nucleus is a methyl radical, and the counterion is a halide,

- b) optionally rinsing the keratin fibers,
- c) optionally washing the keratin fibers with shampoo and rinsing the keratin fibers, and
- d) drying the keratin fibers or leaving the keratin fibers to dry.

45. The process according to Claim 44, further comprising a preliminary operation comprising

separately storing, on the one hand, said composition, and, on the other hand, a composition comprising, in a cosmetically acceptable medium, at least one oxidizing agent, mixing together the two compositions at the time of use, applying this mixture to the keratin fibers for a time that is sufficient to develop desired coloration,

rinsing the keratin fibers, and

optionally washing the keratin fibers with shampoo, rinsing the keratin fibers again, and drying the keratin fibers.

46. The process according to Claim 44, wherein the human keratin fibers are hair with a tone height of less than or equal to 6.

47. The process according to Claim 46, wherein the human keratin fibers are hair with a tone height of less than or equal to 4.

48. The process according to Claim 44, wherein the human keratin fibers are artificially colored or pigmented.

49. A process for coloring dark skin with a lightening effect, comprising applying to the skin a composition comprising, in a cosmetically acceptable medium, at least one fluorescent dye that is soluble in said medium; and at least one associative polymer chosen from associative polyurethane derivatives, associative cellulose derivatives, associative polyvinyl lactam derivatives and associative unsaturated polyacid derivatives;

provided that the composition does not comprise, as a fluorescent agent, 2-[2-(4-dialkylamino)phenylethenyl]-1-alkylpyridinium wherein the alkyl radical of the pyridinium nucleus is a methyl or ethyl radical, the alkyl radical of the benzene nucleus is a methyl radical, and the counterion is a halide; and drying the skin or leaving the skin to dry.

50. A multi-compartment device for coloring and/or lightening keratin fibers, comprising

at least one compartment comprising a composition comprising, in a cosmetically acceptable medium,

at least one fluorescent dye that is soluble in said medium; and

at least one associative polymer chosen from associative polyurethane derivatives, associative cellulose derivatives, associative polyvinyl lactam derivatives and associative unsaturated polyacid derivatives;

provided that the composition does not comprise, as a fluorescent agent, 2-[2-(4-dialkylamino)phenylethenyl]-1-alkylpyridinium wherein the alkyl radical of the pyridinium nucleus is a methyl or ethyl radical, the alkyl radical of the benzene nucleus is a methyl radical, and the counterion is a halide, and

at least one other compartment comprising a composition comprising at least one

oxidizing agent.

51. A method for dyeing a keratin material with a lightening effect comprising, applying to the keratin material a composition comprising, in a cosmetically acceptable medium,

at least one fluorescent dye that is soluble in said medium, and

at least one associative polymer chosen from associative polyurethane derivatives, associative cellulose derivatives, associative polyvinyl lactam derivatives and associative unsaturated polyacid derivatives.

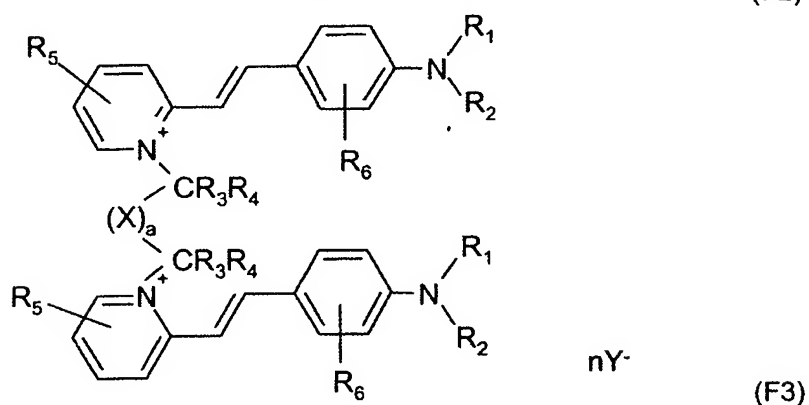
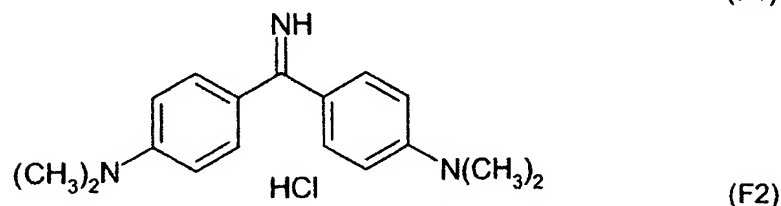
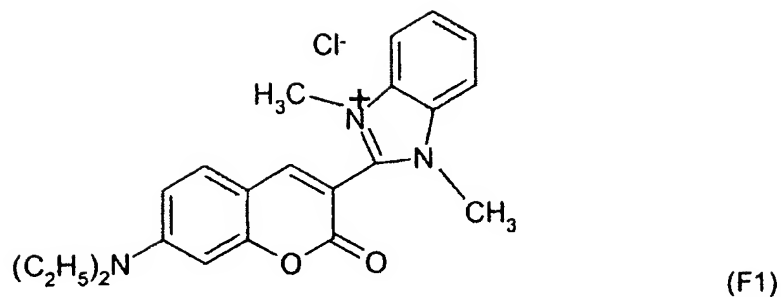
52. The method according to Claim 51, wherein the at least one fluorescent dye is chosen from dyes in the orange range.

53. The method according to Claim 51, wherein the at least one fluorescent dye provides a reflectance maximum that is in the wavelength range from 500 to 650 nanometers.

54. The method according to Claim 53, wherein the at least one fluorescent dye provides a reflectance maximum that is in the wavelength range from 550 to 620 nanometers.

55. The method according to Claim 51, wherein the at least one fluorescent dye is chosen from the fluorescent dyes belonging to the following families: naphthalimides; cationic and non-cationic coumarins; xanthenodiquinolizines; azaxanthenes; naphtholactams; azlactones; oxazines; thiazines; dioxazines; monocationic and polycationic fluorescent dyes of azo, azomethine and methine types.

56. The method according to Claim 51, wherein the at least one fluorescent dye is chosen from dyes of the following formulae (F1), (F2), (F3), and (F4):



wherein:

$R_1$  and  $R_2$ , which may be identical or different, are each chosen from:

- a hydrogen atom;
- linear and branched alkyl radicals comprising from 1 to 10 carbon atoms, optionally interrupted and/or substituted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and/or optionally substituted with at least one halogen atom;
- aryl and arylalkyl radicals, wherein the aryl group comprises 6 carbon atoms and the alkyl radical comprises from 1 to 4 carbon atoms; the aryl radical is optionally substituted with at least one alkyl radical chosen from linear and branched alkyl radicals comprising from 1 to 4 carbon atoms optionally interrupted and/or substituted

with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and/or optionally substituted with at least one halogen atom;

- R<sub>1</sub> and R<sub>2</sub> may optionally be linked so as to form a heterocycle with the nitrogen atom and may comprise at least one other hetero atom, wherein the heterocycle is optionally substituted with at least one alkyl radical chosen from linear and branched alkyl radicals and is optionally interrupted and/or substituted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and/or optionally substituted with at least one halogen atom; and
- R<sub>1</sub> or R<sub>2</sub> may optionally be engaged in a heterocycle comprising the nitrogen atom and one of the carbon atoms of the phenyl group bearing said nitrogen atom;

R<sub>3</sub> and R<sub>4</sub>, which may be identical or different, are each chosen from a hydrogen atom and alkyl radicals comprising from 1 to 4 carbon atoms;

R<sub>5</sub>, which may be identical or different, are each chosen from a hydrogen atom, halogen atoms, and linear and branched alkyl radicals comprising from 1 to 4 carbon atoms, optionally interrupted with at least one hetero atom;

R<sub>6</sub>, which may be identical or different, are each chosen from a hydrogen atom; halogen atoms; linear and branched alkyl radicals comprising from 1 to 4 carbon atoms, optionally substituted and/or interrupted with at least one entity chosen from hetero atoms and groups bearing at least one hetero atom and/or optionally substituted with at least one halogen atom;

X is chosen from:

- linear and branched alkyl radicals comprising from 1 to 14 carbon atoms and alkenyl radicals comprising from 2 to 14 carbon atoms, optionally interrupted and/or

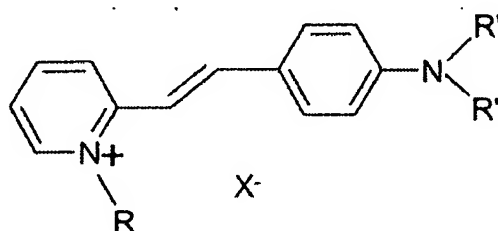


- substituted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and/or optionally substituted with at least one halogen atom;
- 5- and 6-membered heterocyclic radicals optionally substituted with at least one alkyl radical chosen from linear and branched alkyl radicals comprising from 1 to 14 carbon atoms, optionally substituted with at least one hetero atom; optionally substituted with at least one aminoalkyl radical chosen from linear and branched aminoalkyl radicals comprising from 1 to 4 carbon atoms, optionally substituted with at least one hetero atom; and optionally substituted with at least one halogen atom;
- fused and non-fused, aromatic and diaromatic radicals, optionally separated with at least one alkyl radical chosen from alkyl radicals comprising from 1 to 4 carbon atoms, wherein at least one of the aryl radicals is optionally substituted with at least one halogen atom or with at least one alkyl radical chosen from alkyl radicals comprising from 1 to 10 carbon atoms optionally substituted and/or interrupted with at least one entity chosen from hetero atoms and groups bearing at least one hetero atom; and
- a dicarbonyl radical;
- provided that the group X possibly bears at least one cationic charge;

a is equal to 0 or 1;

Y<sup>-</sup>, which may be identical or different, are each an anion chosen from organic and mineral anions;

n is an integer at least equal to 2 and at most equal to the number of cationic charges present in the fluorescent compound; and



(F4)

wherein R is chosen from methyl and ethyl radicals; R' are each a methyl radical and X<sup>-</sup> is an anion.

57. The method according to Claim 56, wherein in the formula (F3) defining R<sub>1</sub> and R<sub>2</sub>, the linear and branched alkyl radicals are chosen from linear and branched alkyl radicals comprising from 1 to 4 carbon atoms.

58. The method according to Claim 56, wherein in the formula (F3) defining R<sub>1</sub> and R<sub>2</sub>, the heterocycle is optionally substituted with at least one alkyl radical chosen from linear and branched alkyl radicals comprising from 1 to 4 carbon atoms.

59. The method according to Claim 56, wherein in the formula (F4), X<sup>-</sup> is an anion chosen from chloride, iodide, sulphate, methasulphate, acetate, and perchlorate.

60. The method according to Claim 51, wherein the at least one fluorescent dye is present in an amount ranging from 0.01% to 20% by weight, relative to the total weight of the composition.

61. The method according to Claim 60, wherein the at least one fluorescent dye is present in an amount ranging from 0.05% to 10% by weight, relative to the total weight of the composition.

62. The method according to Claim 61, wherein the at least one fluorescent dye is present in an amount ranging from 0.1% to 5% by weight, relative to the total weight of the composition.

63. The method according to Claim 51, wherein the at least one associative polymer is present in an amount ranging from 0.01% to 10% by weight, relative to the total weight of the composition.

64. The method according to Claim 63, wherein the at least one associative polymer is present in an amount ranging from 0.1% to 5% by weight, relative to the total

weight of the composition.

65. The method according to Claim 51, wherein the keratin material is chosen from artificially colored and pigmented keratin fibers and dark skin.

66. The method according to Claim 65, wherein the keratin fibers are hair.

67. The method according to Claim 66, wherein the hair has a tone height of less than or equal to 6.

68. The method according to Claim 67, wherein the hair has a tone height of less than or equal to 4.